

Netcentric and Client/Server Computing

A Practical Guide

1999

Mark Goodyear
Hugh W. Ryan
Scott R. Sargent
Stanton J. Taylor
Timothy M. Boudreau
Yannis S. Arvanitis
Richard A. Chang
John K. Kaltenmark
Nancy K. Mullen
Shari L. Dove
Michael C. Davis
John C. Clark
Craig Mindrum

 Andersen
Consulting


AUERBACH

Netcentric and Client/Server Computing

A Practical Guide

1999

Mark Goodyear
Hugh W. Ryan
Scott R. Sargent
Stanton J. Taylor
Timothy M. Boudreau
Yannis S. Arvanitis
Richard A. Chang
John K. Kaltenmark
Nancy K. Mullen
Shari L. Dove
Michael C. Davis
John C. Clark
Craig Mindrum

 Andersen
Consulting



AUERBACH

Boca Raton London New York Washington, D.C.

BEST AVAILABLE COPY

Library of Congress Cataloging-in-Publication Data

Netcentric and client/server computing : a practical guide

Andersen Consulting.

p. cm.

Includes index.

ISBN 0-8493-9967-X (alk. paper)

1. Netcentric computing. I. Andersen Consulting.

QA76.9.N47N48 1998

004.6--dc21

98-44476

CIP

This book contains information obtained from authentic and highly regarded sources. Reprinted material is quoted with permission, and sources are indicated. A wide variety of references are listed. Reasonable efforts have been made to publish reliable data and information, but the author and the publisher cannot assume responsibility for the validity of all materials or for the consequences of their use.

Neither this book nor any part may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, microfilming, and recording, or by any information storage retrieval system, without prior permission in writing from the publisher.

All rights reserved. Authorization to photocopy items for internal or personal use, or the personal or internal use of clients, may be granted by CRC Press LLC, provided that \$.50 per page photocopied is paid directly to Copyright Clearance Center, 27 Congress Street, Salem, MA 01970 U.S. The fee code for users of the Transactional Reporting Service is ISBN 0-8493-9967-X/99/\$0.00 + \$.50. The fee is subject to change without notice. For organizations that have been granted a photocopy license by the CCC, a separate system of payment has been arranged.

The consent of CRC Press LLC does not extend to copying for general distribution, for promotion, for creating new works, or for resale. Specific permission must be obtained in writing from CRC Press LLC for such copying.

Direct all inquiries to CRC Press LLC, 2000 Corporate Blvd., N.W., Boca Raton, Florida, 33431.

Trademark Notice: Product or corporate names may be trademarks or registered trademarks, and are used only for identification and explanation, without intent to infringe.

© 1999 by CRC Press LLC

Auerbach is an imprint of CRC Press LLC

No claim to original U.S. Government works

International Standard Book Number 0-8493-9967-X

Printed in the United State of America 1 2 3 4 5 6 7 8 9 0

Printed on acid-free paper

Table of Contents

INTRODUCTION	V
--------------------	---

SECTION I

OVERVIEW OF NETCENTRIC COMPUTING SOLUTIONS

1 Netcentric: The Evolution of Computing, Frameworks, and Architectures	1-1
2 Netcentric Computing and New Business Capabilities	2-1

SECTION II

ARCHITECTURES AND FRAMEWORKS FOR NETCENTRIC COMPUTING

3 Architecture Frameworks for Client/Server and Netcentric Computing	3-1
4 Presentation Services	4-1
5 Information Services	5-1
6 Communications Architectures	6-1
7 Transaction Services	7-1
8 Environment Services	8-1
9 Base Services	9-1
10 Development Architecture	10-1
11 A Framework for Testing Netcentric Applications	11-1
12 Operations Architecture	12-1
13 Transition Frameworks for Netcentric Environments	13-1
14 Platform Architecture	14-1

SECTION III

DESIGNING AND IMPLEMENTING NETCENTRIC SOLUTIONS

15 A Framework for Netcentric Implementation	15-1
16 Design and Implementation of Client/Server and Netcentric Architectures	16-1
17 Overview of Data and Process Distribution	17-1
18 Finalizing the Distribution Strategy	18-1

Table of Contents

19	Netcentric Integration with Existing Systems	19-1
20	Interface Design	20-1
21	System Controls	21-1
22	Network Infrastructure Options for Netcentric Implementation	22-1
23	Management of Distributed Operations	23-1
24	Testing Implementation	24-1
25	Site Preparation and Installation	25-1
26	Project Management	26-1
27	Change Management	27-1

SECTION IV

SPECIAL TOPICS

28	Netcentric Security	28-1
29	Knowledge Management	29-1
30	Collaborative Computing Solutions	30-1
31	Data Mining	31-1
32	The Information Delivery Facility: Beyond Data Warehousing	32-1
33	Componentware	33-1
34	Costs and Frameworks for Managing the Client/Server Environment	34-1

ABOUT THE AUTHORS	A-1
--------------------------------	------------

INDEX	IN-1
--------------------	-------------

Acknowledgments

This book represents the accumulated knowledge and experience of many individuals and groups within Andersen Consulting, in addition to the named authors. We would like to thank, in particular, the following people who made substantive contributions to the information in this book:

Michael W. Alber
Prem N. Mehra
William M. Gilliland
Anthony Roby
Chris M. Degiorgio
David A. Antonioli
David K. Black
James P. Behling
William W. Westerman
Anatole V. Gershman
Glover T. Ferguson
David K. Black
Jennifer L. Wilson
John P. Jordan
Sharon K. Dietz
Bill G. Chang
David Chen
Jeff A. Goldberg
Stephen A. Barlock